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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/639,677

08/13/2003

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ALC 3414

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7590

07/07/2009

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EXAMINER

SURVILLO, OLEG

ART UNIT

PAPER NUMBER

2442

MAIL DATE

DELIVERY MODE

07/07/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/639,677	Applicant(s) CUERVO ET AL.	
	Examiner OLEG SURVILLO	Art Unit 2442	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,6,8,9,11-13 and 17-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6,8,9,11-13 and 17-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission dated April 20, 2009 has been entered.

Response to Amendment

2. Claims 1, 2, 6, 8, 9, 11-13, and 17-20 remain pending in the application. Claims 1, 6, 9, 11, and 17-20 are currently amended. Claims 3-5, 7, 10, and 14-16 have been canceled. No new claims have been added.

Response to Arguments

3. With regard to applicants' remarks dated April 20, 2009:

regarding objection to the specification and the rejection of claims 1, 2, 6, 8, 9, 11-13, and 17-20 under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, applicants' arguments have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

Regarding the rejection of claims 1, 6, 9, 11, 17, and 18 under 35 U.S.C. 112, second paragraph, applicants' amendment and arguments have been fully considered and are sufficient. Therefore, the rejection has been withdrawn.

Regarding the rejection of claims 1, 2, 6, 8, 17, and 19 under 35 U.S.C. 101, applicants' amendments and arguments have been fully considered and are sufficient. Therefore, the rejection has been withdrawn.

As to any arguments not specifically addressed, they are the same as those discussed above.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 6, and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Marchand (US Patent 6,714,515 B1).

As to claim 1, the preamble has been given patentable weight since the claim body refers back to the preamble. See "the communications network" as lines 1-2.

As to claim 1, Marchand shows an apparatus that establishes services that utilize policy-enabled resources in a communications network (Fig. 3), comprising:

a first policy enforcement point (PEP) residing on a network element of the communications network [edge router (11)] (Fig. 1) that performs identification of policy-enabled resources that are available and allocates requested policy-enabled resources to services (col. 5 lines 13-17);

a first network resource controller (NRC) within a domain on the communications network [Bandwidth Broker (BB)] (Fig. 3) that makes requests, from available policy-enabled resources, of any policy-enabled resources within a first domain required to establish a particular service (col. 4 lines 17-21), the requests from the available policy-enabled resources being separate from the identification of the policy-enabled resources [the functionality of PEP is separate from the functionality of BB]; and

a first resource policy layer (RPL) that establishes the particular service [intra-domain interface toward an edge router (37)] (col. 4 lines 15-17) and provisions the policy-enabled resources allocated to the particular service, said first resource policy layer including a first policy decision point (PDP) [intra-domain interface (37) is part of BB (31) that functions as a PDP of that domain] (col. 5 lines 18-40), wherein:

said first NRC acts as a trusted entity that initiates an association between said first PEP and said first PDP [BB (31) is in communication with the edge router (11) in that domain] (Fig. 3; col. 4 lines 7-21),

said first PDP provides said first PEP with policies upon establishment of said association between said first PEP and first PDP (col. 5 lines 18-25), and

when said first NRC requires resources from a second domain outside the first domain, said first NRC signals a request to a second NRC in said second domain [inter-

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domain interface (36) enables the BB to communicate with BBs in adjacent domains] (col. 7 lines 13-18), which acts as the trusted entity that initiates an association between a second PEP in said second domain [edge router in adjacent domain] and said first PDP [BB in the first domain establishes communication with the edge router in adjacent domain through the BB in said adjacent domain] (col. 7 lines 13-18), said first PDP providing said second PEP with the policies upon establishment of said association between said second PEP and said first PDP (col. 7 lines 13-20).

As to claim 6, Marchand shows a second RPL associated with the second domain [intra-domain interface of an adjacent BB] (Fig. 3) comprising the second PEP [adjacent domain comprises edge routers belonging to that domain].

As to claim 9, Marchand shows:

identifying, at a first policy enforcement point (PEP) [edge router (11)] (Fig. 1), policy-enabled resources within a first domain that are available and allocating requested policy-enabled resources to services (col. 5 lines 13-17);

requesting, from available policy-enabled resources at a first network resource controller (NRC) [Bandwidth Broker (BB)] (Fig. 3) any policy-enabled resources required to establish a particular service (col. 4 lines 17-21), the requesting step being separate from the identifying step [the functionality of PEP is separate from the functionality of BB];

establishing the particular service with a first resource policy layer (RPL) [intra-domain interface toward an edge router (37)] (col. 4 lines 15-17); and

provisioning, to the established service, the policy-enabled resources allocated to the established service, said first resource policy layer including a first policy decision point (PDP) [intra-domain interface (37) is part of BB (31) that functions as a PDP of that domain] (col. 5 lines 18-40), wherein:

said first NRC acts as a trusted entity that initiates an association between said first PEP and said first PDP [BB (31) is in communication with the edge router (11) in that domain] (Fig. 3; col. 4 lines 7-21),

said first PDP provides said first PEP with policies upon establishment of said association between said first PEP and said first PDP (col. 5 lines 18-25), and

when said first NRC requires resources from a second domain outside the first domain, said first NRC signals a request to a second NRC in said second domain [inter-domain interface (36) enables the BB to communicate with BBs in adjacent domains] (col. 7 lines 13-18), which acts as the trusted entity that initiates an association between a second PEP in said second domain [edge router in adjacent domain] and said first PDP [BB in the first domain establishes communication with the edge router in adjacent domain through the BB in said adjacent domain] (col. 7 lines 13-18), said first PDP providing said second PEP with the policies upon establishment of said association between said second PEP and said first PDP (col. 7 lines 13-20).

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Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 11-13, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marchand in view of Williams et al. (US Patent 7,246,165 B2).

As to claim 2, Marchand shows all the elements except for said first PEP comprising a plurality of virtual PEPs, each virtual PEP being associated to a respective service.

Williams shows that said first PEP [GGSN 16] comprising a plurality of virtual PEPs [virtual GGSNs 20] (Fig. 8), each virtual PEP being associated to a respective service [each virtual GGSN working towards a separate P-CSCF/PCF] (col. 6 line 60 to col. 7 line 32).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Marchand by having said first PEP comprise a plurality of virtual PEPs, each PEP being associated to a respective service in order to enable decisions to be communicated from multiple PDP nodes to a single PEP without a conflict resulting at the PEP (col. 4 lines 25-29 in Williams).

As to claim 11, Marchand shows all the elements except for virtual PEPs of the first PEP are provisioned to provide resource services.

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Williams shows that virtual PEPs [virtual GGSNs 20] (Fig. 8) of the first PEP [GGSN 16] are provisioned to provide resource services [each virtual GGSN working towards a separate P-CSCF/PCF] (col. 6 line 60 to col. 7 line 32).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Marchand by having virtual PEPs of the first PEP being provisioned to provide resource services in order to enable decisions to be communicated from multiple PDP nodes to a single PEP without a conflict resulting at the PEP (col. 4 lines 25-29 in Williams).

As to claim 12, Marchand in view of Williams shows that the virtual PEPs are provisioned to provide services in said second domain (col. 6 line 60 to col. 7 line 32 in Williams).

As to claim 13, Marchand in view of Williams shows that said first PEP and said second PEP are provisioned with the same service by said first PDP (col. 7 lines 12-20 in Marchand).

As to claims 17 and 18, Marchand shows all the elements except for the first PEP and the second PEP being virtual PEPs created upon request for a particular service by one of the first NRC and the second NRC.

Williams shows that the first PEP and the second PEP are virtual PEPs [virtual GGSNs 20] (Fig. 8) that are created upon request for a particular service [v-GGSNs 20

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are created when the users are actually connected and the PCF they are working towards is identified] (col. 7 lines 5-26).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus and method of Marchand by having the first PEP and the second PEP being virtual PEPs created upon request for a particular service by one of the first NRC and the second NRC of Marchand in order to enable decisions to be communicated from multiple PDP nodes to a single PEP without a conflict resulting at the PEP (col. 4 lines 25-29 in Williams).

As to claim 19, the preamble has been given patentable weight since the claim body refers back to the preamble. See “the communications network” as lines 1-2.

As to claim 19, Marchand shows an apparatus that establishes services that utilize policy-enabled resources in a communications network (Fig. 3), comprising:

a first network resource controller (NRC) within a domain on the communications network [Bandwidth Broker (BB)] (Fig. 3), said first NRC requesting, from available policy-enabled resources, of any policy-enabled resources required to establish a particular service (col. 4 lines 17-21);

a first policy enforcement point (PEP) residing on a network element of the communications network [edge router (11)] (Fig. 1), said PEP identifying policy-enabled resources that are available and allocating requested policy-enabled resources to the particular service (col. 5 lines 13-17);

a resource policy layer (RPL) that establishes the particular service [intra-domain interface toward an edge router (37)] (col. 4 lines 15-17) and includes a policy decision point (PDP) [intra-domain interface (37) is part of BB (31) that functions as a PDP of that domain] (col. 5 lines 18-40), wherein the PEP is provided with information to contact the PDP of the RPL in order to provision the policy-enabled resources allocated to the particular service (col. 5 lines 18-25).

Marchand does not show that the first PEP is a virtual PEP that is created upon requesting the particular service.

Williams shows that the first PEP is a virtual PEP [virtual GGSN 20] (Fig. 8) that is created upon requesting the particular service [v-GGSN 20 is created when the users are actually connected and the PCF they are working towards is identified] (col. 7 lines 5-26).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Marchand by having the first PEP being a virtual PEP that is created upon requesting the particular service in order to enable decisions to be communicated from multiple PDP nodes to a single PEP without a conflict resulting at the PEP (col. 4 lines 25-29 in Williams).

As to claim 20, Marchand shows:

requesting, from available policy-enabled resources at a first network resource controller (NRC) [Bandwidth Broker (BB)] (Fig. 3), any policy-enabled resources required to establish a particular service (col. 4 lines 17-21);

identifying, at a first policy enforcement point (PEP) [edge router (11)] (Fig. 1), policy-enabled resources that are available and allocating requested policy-enabled resources to the particular service (col. 5 lines 13-17);

providing the PEP with information to contact a policy decision point (PDP) [intra-domain interface (37) is part of BB (31) that functions as a PDP of that domain] (col. 5 lines 18-40) of a resource policy layer (RPL) [intra-domain interface toward an edge router (37)] (col. 4 lines 15-17);

establishing the particular service with a first resource policy layer (RPL) [intra-domain interface toward an edge router (37)] (col. 4 lines 15-17); and

provisioning, to the established service, the policy-enabled resources allocated to the particular service (col. 5 lines 18-25).

Marchand does not show that the first PEP is a virtual PEP that is created upon requesting the particular service.

Williams shows that the first PEP is a virtual PEP [virtual GGSN 20] (Fig. 8) that is created upon requesting the particular service [v-GGSN 20 is created when the users are actually connected and the PCF they are working towards is identified] (col. 7 lines 5-26).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Marchand by having the first PEP being a virtual PEP that is created upon requesting the particular service in order to enable decisions to be communicated from multiple PDP nodes to a single PEP without a conflict resulting at the PEP (col. 4 lines 25-29 in Williams).

8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Marchand in view of Chan et al. (RFC 3084 COPS Usage for Policy Provisioning (COPS-PR) by Network Working Group). It is noted that this document was first cited by examiner in communication dated 05/01/07. See form PTO-892.

As to claim 8, Marchand shows all the elements except for resource capability information descriptors being used for resource discovery and policy provisioning.

Chan shows that resource capability information descriptors [REQ and DEC messages] are used for resource discovery and policy provisioning (page 3, COPS provisioning model, sections 3.1 and 3.2 REQ and DEC, pages 7-9).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Marchand by having resource capability information descriptors used for resource discovery and policy provisioning in order to utilize COPS protocol for policy outsourcing and policy provisioning in communication between entities (col. 5 line 65 to col. 6 line 6 in Marchand).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLEG SURVILLO whose telephone number is (571)272-9691. The examiner can normally be reached on M-Th 8:30am - 6:00pm; F 8:30am - 5:00pm EST.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner: Oleg Survillo

Phone: 571-272-9691

/Andrew Caldwell/

Supervisory Patent Examiner, Art
Unit 2442